AIR QUALITY PERMIT

Issued To: Montana Megawatts I, LLC
125 S. Dakota Avenue
Sioux Falls, SD 57104-6403

Permit: #3154-03
Administrative Amendment (AA)
Request Received: 09/24/04
Department Decision on AA: 08/09/05
Permit Final: 08/25/05
AFS #: 013-0033

An air quality permit, with conditions, is hereby granted to Montana Megawatts I, LLC (Montana Megawatts), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq*., as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

Montana Megawatts proposed to construct and operate a 262-megawatt (MW) natural gas fired electrical power generation facility located approximately 2 miles north of Great Falls, Montana, and east of U.S. Highway 87. The legal description of the site location is Section 30, Township 21 North, Range 4 East, in Cascade County, Montana. A complete list of the permitted equipment for the natural gas fired 262-MW electrical power generation facility is contained in the permit analysis.

B. Current Permit Action

On September 24, 2004, the Department of Environmental Quality (Department) received a letter from NorthWestern Montana First Megawatts, LLC requesting to modify Permit #3154-02 to change the company name from NorthWestern Montana First Megawatts, LLC to Montana Megawatts. The current permitting action includes the name change and updates the permit to reflect current permit language and rule references used by the Department.

SECTION II: Conditions and Limitations – Simple Cycle

A. Emission Limitations

1. Emissions from each of the two 80 MW natural gas powered turbines shall not exceed the following limits (ARM 17.8.752):

Oxides of Nitrogen (NO_x)	
NO_x – during times other than peak load:	40.0 pounds per hour (lb/hr)
NO_x – during times of peak load:	120.0 lb/hr
Carbon Monoxide (CO):	27.0 lb/hr
Particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}):	10.0 lb/hr

2. The hours of operation, at peak load, for each of the two turbines shall not exceed 500 hours during any rolling 12-month time period (ARM 17.8.749).

3. Peak load shall be defined as the combustion mode when the internal combustion turbine firing temperature is increased by more than 100.0°F above the nominal 100% baseload combustion firing temperature. The firing temperature is a combination of measured and calculated results to determine the true firing temperature in the combustion liner (ARM 17.8.749).

4. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the NO_x emissions from the facility is less than 100 tons per rolling 12-month time period. Any calculations used to establish NO_x emissions shall be approved by the Department and shall be based on the NO_x data from the continuous emission monitor system (CEMS) for each turbine (ARM 17.8.749 and ARM 17.8.1204).

5. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the CO emissions from the facility is less than 97.5 tons per rolling 12-month time period. Any calculations used to establish CO emissions shall be approved by the Department and shall be based on the average hourly temperature from the National Weather Service office in Great Falls and the average hourly load for each turbine (ARM 17.8.749 and ARM 17.8.1204).

6. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the particulate matter (PM) and PM_{10} emissions from the facility is less than 100 tons per rolling 12-month time period. Any calculations used to establish PM and PM_{10} emissions shall be approved by the Department (ARM 17.8.749 and ARM 17.8.1204).

7. Montana Megawatts shall only combust pipeline quality natural gas in the compressor turbines (ARM 17.8.749).

8. Montana Megawatts shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304).

9. Montana Megawatts shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

10. Montana Megawatts shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.9 (ARM 17.8.749).

11. Montana Megawatts shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart GG (ARM 17.8.340 and 40 CFR 60, Subpart GG).

12. Montana Megawatts shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements of the Acid Rain Program contained in 40 CFR 72-78 (40 CFR 72 through 40 CFR 78).

13. The requirements of Section II of this permit shall only apply until the Montana Megawatts facility constructs and begins operating in a combined cycle mode (ARM 17.8.749).

14. Upon commencement of operation in the combined cycle mode, Montana Megawatts shall comply with the conditions identified in Section III of this permit (ARM 17.8.749).

B. Testing Requirements

1. Montana Megawatts shall test each of the two 80-MW simple cycle turbines, concurrently, for NO_x and CO, and demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.1. Testing shall be conducted within 180 days of initial start-up of the simple cycle turbines and continue on an every two-year basis or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

2. Montana Megawatts shall test each of the two 80-MW simple cycle turbines for PM_{10}, and demonstrate compliance with the PM_{10} emission limits contained in Section II.A.1. Testing shall be conducted within 180 days of initial start-up of the simple cycle turbines and continue on an every five-year basis or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Montana Megawatts shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

   Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Montana Megawatts shall document, by hour, the internal combustion turbine firing temperature and the nominal 100% baseload combustion firing temperature. Montana Megawatts shall also identify those times when the internal combustion firing temperature exceeds the nominal 100% baseload combustion firing temperature by more than 100.0°F (ARM 17.8.749).

3. Montana Megawatts shall document, by month, the hours of operation, at peak load, for each of the two simple cycle turbines. By the 25th day of each month, Montana Megawatts shall total the hours of operation for each of the two simple cycle turbines, at peak load, during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.2. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

4. Montana Megawatts shall document, by month, the amount of NO_x emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of NO_x emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.4. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

5. Montana Megawatts shall document, by month, the amount of CO emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of CO emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.5. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

6. Montana Megawatts shall document, by month, the amount of PM and PM_{10} emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of PM and PM_{10} emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.6. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

7. Montana Megawatts shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

8. All records compiled in accordance with this permit must be maintained by Montana Megawatts as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

9. Montana Megawatts shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

Montana Megawatts shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.749):

1. Commencement of construction of the power generation facility within 30 days after commencement of construction;

2. Actual start-up date of the first 80-MW turbine within 15 days after the actual start-up of the turbine;

3. Actual start-up date of the second 80-MW turbine within 15 days after the actual start-up of the turbine.

SECTION III: Conditions and Limitations – Combined Cycle

A. Emissions Limitations

1. Montana Megawatts shall operate and maintain an SCR unit in addition to the integral dry low NO_x burner on each of the 131-MW natural gas powered combined cycle turbine/heat recovery steam generator (HRSG) stacks (ARM 17.8.749).

2. Montana Megawatts shall operate and maintain an oxidation catalyst on each of the 131 MW natural gas powered combined cycle turbine/HRSG stacks (ARM 17.8.749).

3. Emissions from each of the 131-MW natural gas powered turbine/HRSG stacks shall not exceed the following limits (ARM 17.8.752):

NO_x:	49.97 lb/hr
CO:	37.97 lb/hr
PM_{10}:	11.23 lb/hr

4. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the NO_x emissions from the facility is less than 100 tons per rolling 12-month time period. Any calculations used to establish NO_x emissions shall be approved by the Department and shall be based on the NO_x data from the CEMS for each turbine (ARM 17.8.749 and ARM 17.8.1204).

5. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the CO emissions from the facility is less than 97.5 tons per rolling 12-month time period. Any calculations used to establish CO emissions shall be approved by the Department and shall be based on the average hourly temperature from the National Weather Service office in Great Falls and the average hourly load for each turbine (ARM 17.8.749 and ARM 17.8.1204).

6. Montana Megawatts shall limit the hours of operation, the capacity, and/or the natural gas consumption of the two turbines such that the sum of the PM and PM_{10} emissions from the facility is less than 100 tons per rolling 12-month time period. Any calculations used to establish PM and PM_{10} emissions shall be approved by the Department (ARM 17.8.749 and ARM 17.8.1204).

7. Montana Megawatts shall limit the combined hours of operation of the two duct burners to no more than 10,000 hours per rolling 12-month time period (ARM 17.8.749).

8. Montana Megawatts shall limit the hours of operation of the emergency water pump to no more than 500 hours per rolling 12-month time period (ARM 17.8.749).

9. Montana Megawatts shall only combust pipeline quality natural gas in the compressor turbines (ARM 17.8.749).

10. Montana Megawatts shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes (ARM 17.8.304).

11. Montana Megawatts shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

12. Montana Megawatts shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.11 (ARM 17.8.749).

13. Montana Megawatts shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart GG (ARM 17.8.340 and 40 CFR 60, Subpart GG).

14. Montana Megawatts shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and the notification requirements contained in 40 CFR 63, Subpart Q (ARM 17.8.342 and 40 CFR 63, Subpart Q).

15. Montana Megawatts shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements of the Acid Rain Program contained in 40 CFR 72-78 (40 CFR 72 through 40 CFR 78).

B. Testing Requirements

1. Montana Megawatts shall test each of the two 131-MW combined cycle turbines, concurrently, for NO_x and CO, and demonstrate compliance with the NO_x and CO emission limits contained in Section III.A.3. Testing shall be conducted within 180 days of initial start-up of the combined cycle turbines and continue on an every two-year basis or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

2. Montana Megawatts shall test each of the two 131-MW combined cycle turbines for PM_{10}, and demonstrate compliance with the PM_{10} emission limits contained in Section III.A.3. Testing shall be conducted within 180 days of initial start-up of the simple cycle turbines and continue on an every five-year basis or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Montana Megawatts shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Montana Megawatts shall document, by month, the amount of NO_x emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of NO_x emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.4. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

3. Montana Megawatts shall document, by month, the amount of CO emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of CO emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.5. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

4. Montana Megawatts shall document, by month, the amount of PM and PM_{10} emissions from the facility. By the 25th day of each month, Montana Megawatts shall total the amount of PM and PM_{10} emissions from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.6. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

5. Montana Megawatts shall document, by month, the total hours of operation of the HRSG duct burners. By the 25th day of each month, Montana Megawatts shall total the combined hours of operation of the HRSG duct burners from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.7. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

6. Montana Megawatts shall document, by month, the total hours of operation of the emergency water pump. By the 25th day of each month, Montana Megawatts shall total the combined hours of operation of the emergency water pump from the facility during the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.8. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

7. Montana Megawatts shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

8. All records compiled in accordance with this permit must be maintained by Montana Megawatts as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

9. Montana Megawatts shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

Montana Megawatts shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.749):

1. Commencement of construction of the HRSG units within 30 days after commencement of construction;

2. Actual start-up date of each of the two 131-MW turbines/HRSG units within 15 days after the actual start-up of each turbine/HRSG unit.

SECTION IV: General Conditions

A. Inspection – Montana Megawatts shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Montana Megawatts fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Montana Megawatts of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Montana Megawatts may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

Permit Analysis
Montana Megawatts I, LLC
Permit #3154-03

I. Introduction/Process Description

Montana Megawatts I, LLC (Montana Megawatts) operates a natural gas fired electrical power facility located in Section 30, Township 21 North, Range 4 East, approximately 2 miles north of the city of Great Falls, in Cascade County, Montana.

A. Permitted Equipment

On May 28, 2001 a complete permit application was submitted by NorthWestern Montana First Megawatts, LLC (NorthWestern) for an alteration of Permit #3154-01 to install and operate two 131-megawatt (MW) General Electric PG7121EA combined cycle gas turbines, and two associated heat recovery steam generators (HRSG) to produce electrical power. Emissions of oxides of nitrogen (NO_x) will be controlled by dry low NO_x combustors that are integral to the design of the PG7121EA turbines and by selective catalytic reduction (SCR) units installed on each turbine. Emissions of carbon monoxide (CO) will be controlled by a catalytic oxidizer. NorthWestern will also install and operate a 102-MW steam turbine and associated cooling tower.

B. Source Description

A gas turbine is an internal combustion engine that operates with rotary rather than reciprocating motion. Within each combustion turbine unit, a mixture of compressed air and natural gas is fired in the combustor to produce compressed hot combustion gases. Expansion of these gases in the turbine rotates the turbine shaft that turns a generator to produce electricity.

In stationary applications, the hot combustion gases are directed through one or more fan-like turbine wheels to generate shaft horsepower. A simple cycle turbine is the most basic operating cycle of a gas turbine. It functions with only three primary sections: a compressor, a combustor, and a turbine.

The compressor draws in ambient air and compresses it to a pressure of up to 30 times ambient pressure. The compressed air is then directed to the combustor section where fuel is introduced, ignited, and burned. The hot combustion gases are then diluted with additional cool air from the compressor section and directed to the turbine section. Energy is recovered in the turbine section in the form of shaft horsepower; typically greater than 50 percent of the horsepower is required to drive the internal compressor section. The balance of the recovered shaft energy is available to drive the external load unit. The compressor and turbine sections can be a single fan-like wheel assembly, but are usually made up of a series of stages. The compressor and turbine sections may be associated with one or several connecting shafts. In a single shaft gas turbine, all compressor and turbine stages are fixed to a single continuous shaft and operate at the same speed. The single shaft configuration is typically used to drive electric generators.

The addition of an HRSG to the simple cycle turbine unit creates a combined cycle unit. Heat energy in the turbine exhaust gases is recovered by the HRSG to create steam. This steam energy is then converted to mechanical and electrical energy when it passes through a steam turbine generator unit. Additional heat for the creation of steam can be supplied by duct burners, which increase the turbine exhaust gas temperature. HRSG operation is not dependent upon the firing of the duct burners.

The NorthWestern facility will consist of one steam turbine and two combined cycle gas turbines. The turbines are equipped with dry low NO_x combustors, which are integral to the design of the gas turbines. The gas turbines are manufactured by General Electric. The Model PG7121EA gas turbines have a gross power output of 84.4 MW and a gross heat rate of 10,480 British thermal units per kilowatt-hour (Btu/kWh). The nominal power output of these turbines is 80 MW. The HRSG units, manufactured by Deltak, will be equipped with an SCR and a CO catalyst to further reduce potential NO_x and CO emissions. The steam turbine has a gross power output of 102 MW and the duct burner has a gross heat rate of 2,120 Btu/kWh. The nominal output power of the facility is 262 MW.

The Department placed NO_x emission limits on the facility and required the installation and operation of an SCR unit on each turbine/HRSG unit. Since emissions from the General Electric turbines vary with temperature and load, the Department of Environmental Quality (Department) placed limitations on the NorthWestern facility based on temperature and load. Specifically, the NO_x emissions from the facility increase at times of peak load, so the Department established separate emission limits for those times when the unit is operating at peak load. Furthermore, the Department added a limit to the permit on the amount of time that the facility can operate at peak load. In general, peak load reflects the combustion mode when internal combustion turbine firing temperature is increased by more than 100.0°F above the nominal 100% baseload combustion firing temperature. The firing temperature is a combination of measured and calculated results to determine the true firing temperature in the combustion liner.

The Department also placed limits in the permit to keep the NorthWestern facility below the New Source Review (NSR) thresholds, and consequently, the Title V thresholds as well. The permit is written to allow NorthWestern to operate the simple cycle turbines while construction is in progress for the addition of the HRSG's and steam turbine. Annual NO_x emissions for the entire facility are limited to less than 100 tons per year regardless of which mode NorthWestern is currently operating under or has operated under during the previous 12 months. NorthWestern is required to track the NO_x emissions according to a rolling 12-month time period, using data taken from continuous emission monitors, weather service data, and/or actual power output.

C. Permit History

On October 12, 2001, NorthWestern was issued Permit #3154-00 for the construction and operation of a nominal 160-MW power generation facility. The permitted facility consisted of two 80-MW General Electric PG7121EA simple cycle gas turbines. After issuance of the Department's Decision on this permit, the permit was appealed to the Board of Environmental Review. Prior to the hearing date scheduled for the NorthWestern appeal, NorthWestern reached a settlement with the appellants. The appellants agreed to drop their appeal if NorthWestern would commit to taking additional actions to counteract the emissions from this facility. NorthWestern agreed to the conditions, but the conditions were not included as part of Permit #3154-00. Instead, the settlement conditions represent an additional agreement between the appellants and NorthWestern.

On January 23, 2002, NorthWestern was issued Permit #3154-01 for the modification of Permit #3154-00. After issuance of the original permit, NorthWestern discovered that equipment modifications can be incorporated into the two turbines that will result in an equal or lower amount of CO emissions, without the use of a CO catalyst. Based on the information that NorthWestern received regarding the equipment modifications, NorthWestern requested that

the permit be modified to remove the requirement to install CO catalysts and that the existing emission limits remain the same. The Department agreed with the change and modified the permit to reflect the change. Permit **#3154-01** replaced Permit #3154-00.

On May 28, 2002, the Department received a request from NorthWestern to alter Permit #3154-01 for the potential to add an HRSG to each of the existing 80-MW natural gas-fired simple cycle combustion turbines. The addition of the HRSGs converts the simple cycle turbines into combined cycle systems. The exhaust heat generated from the simple-cycle turbines will produce steam, which will drive a steam turbine. NorthWestern anticipates an additional 102 MW of power generation from the installation of the two HRSGs and one steam turbine, for a total of 262 MW from the facility. Permit **#3154-02** replaced Permit #3154-01.

Based on comments during the preliminary determination comment period, the Department has included conditions to allow NorthWestern to operate simple cycle turbines while construction is in progress for the addition of the HRSG's and steam turbine. Once the combined cycle turbines are constructed and operating, Section II of this permit will no longer apply.

D. Current Permit Action

On September 24, 2004, the Department received a letter from NorthWestern requesting to modify Permit #3154-02 to change the company name from NorthWestern Montana First Megawatts, LLC to Montana Megawatts. The current permitting action includes the name change and updates the permit to reflect current permit language and rule references used by the Department. Permit **#3154-03** replaces Permit #3154-02.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department. Based on emissions from the turbines, the Department determined that initial testing for NO_x, CO, and particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) is necessary. Furthermore, based on the emissions from the turbines, the Department determined that

additional testing every two years is necessary to demonstrate compliance with the NO_x and CO limits and additional testing every five years is necessary to demonstrate compliance with the PM_{10} emission limit.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

   Montana Megawatts shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than four hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

Montana Megawatts must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This section requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate. (2) Under this section, Montana Megawatts shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.340 Standard of Performance for New Stationary Sources. This section incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Montana Megawatts' combined cycle turbines are considered NSPS affected facilities under 40 CFR Part 60 and are subject to the requirements of the following subpart.

   40 CFR Part 60, Subpart GG Standards of Performance for Stationary Gas Turbines. This subpart applies to both of the combined cycle turbines because the turbines were constructed after October 3, 1977, and because the turbines will have a heat input capacity of greater than 10.7 gigajoules per hour.

4. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This section incorporates, by reference, 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP). Since the emission of Hazardous Air Pollutants (HAP) from the Montana Megawatts power generation facility is less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAP combined, the Montana Megawatts facility is not subject to the provisions of 40 CFR Part 61.

5. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This section incorporates, by reference, 40 CFR Part 63, NESHAP for Source Categories. Under most circumstances, when the emission of HAP from a facility is less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAP combined, the facility is not subject to the provisions of 40 CFR Part 63. The emission of HAP from the Montana Megawatts power generation facility is less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAP combined. However, since Montana Megawatts has a new industrial process cooling tower (IPCT), the facility is subject to the provisions of 40 CFR Part 63, Subpart Q, National Emissions Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers.

   40 CFR Part 63, Subpart Q Standards of Performance for Industrial Process Cooling Towers. This subpart applies to all new and existing IPCT that are operated with chromium-based water treatment chemicals on or after September 8, 1994. The regulation states that no owner or operator shall use chromium-based water treatment chemicals in an IPCT. Montana Megawatts does not intend to use chromium-based water treatment chemicals in the cooling tower water. Therefore, the facility will comply with the standard and will meet all compliance and notification requirements in Subpart Q.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Montana Megawatts was not required to submit a fee because the current permitting action is administrative.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. Montana Megawatts has a PTE greater than 25 tons per year of particulate matter (PM), PM_{10}, NO_x, and CO; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Montana Megawatts was not required to submit an application because the current permitting action is administrative. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Montana Megawatts was not required to submit an affidavit of publication of public notice because the current permitting action is administrative.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The BACT analysis is discussed in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Montana Megawatts of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

Although the conversion of the facility from simple cycle gas turbines to combined cycle gas turbines would not increase the air emissions from the turbines, the change makes the facility a "listed facility" and the Prevention of Significant Deterioration (PSD) threshold changes from 250 tons per year to 100 tons per year for a major stationary source. Due to proposed limitations, the facility does not have the potential to emit more than 100 tons per year of any criteria pollutant. Therefore, the Montana Megawatts facility is not deemed a major stationary source and is not subject to review under the PSD program. Based on this proposal, the Department added limits to Permit #3154-02 that keep the potential NO_x, CO, PM and PM_{10} emissions to less than 100 tons per rolling 12-month time period.

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

   a. PTE > 100 tons per year of any pollutant;

   b. PTE > 10 tons per year of any one HAP, PTE > 25 tons per year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons per year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3154-03 for Montana Megawatts, the following conclusions were made:

   a. The facility's PTE is less than 100 tons per year for any pollutant.

   b. The facility's PTE is less than 10 tons per year for any one HAP and less than 25 tons per year for all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

   d. This facility is subject to a current NSPS standard (40 CFR 60, Subpart GG).

   e. This facility is subject to a current NESHAP standard (40 CFR 63, Subpart Q).

   f. This source is a Title IV affected source.

   g. This source is not an EPA designated Title V source.

   h. (2) The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

      i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit, does not require the source to obtain an air quality operating permit.

ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

Montana Megawatts has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required.

The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. Montana Megawatts shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

III. BACT Determination

A BACT determination is required for each new or altered source. Montana Megawatts shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination was not required for the current permit action because the current permit action is considered an administrative permit action.

IV. Emission Inventory

	Ton/Year					
Source	PM	PM_{10}	NO_x	CO	VOC	SO_x
GE 7EA 80-MW Gas Turbine #1	48.00	48.00	48.72	48.98	8.8	2.8
GE 7EA 80-MW Gas Turbine #2	48.00	48.00	48.72	48.98	8.8	2.8
Fire Pump Driver (265-brake horsepower (BHP))	0.046	0.046	0.73	0.36	0.047	0.54
Cooling Tower	2.84	2.84				
Totals	98.89	98.89	98.17	98.32	17.654	6.14

(Note: The above inventory is based on operating in the combined cycle mode. The inventory for the simple cycle mode can be found in Permit #3154-01)

(SOURCE #01)
Combined Cycle GE 7EA 80 MW Gas Turbine #1 plus HRSG unit (duct burner)

Size =	131 MW
Hours of Operation =	8,760 hr/yr
Max Fuel Flow =	8,493,696 MMBtu/yr
Heat Input =	981.71 MMBtu/hr
% Sulfur in Fuel =	0.0023
Fuel Heating Value =	1,020 Btu/SCF

PM Emissions

Emission Factor:	11.23 lb/hr {Manufacturer's Guarantee}
Calculations:	11.23 lb/hr * 8550 hr/yr * 0.0005 ton/lb = 48.0 ton/yr

(Note: Montana Megawatts is not specifically limited to 8550 hours per year. Rather, Montana Megawatts is limited to keeping the PM_{10} emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

PM_{10} Emissions
Emission Factor: 11.23 lb/hr {Manufacturer's Guarantee}
Calculations: 11.23 lb/hr * 8550 hr/yr * 0.0005 ton/lb = 48.0 ton/yr

NO_x Emissions
Emission Factor: 49.97 lb/hr {Manufacturer's Guarantee and SCR}
Calculations: 49.97 lb/hr * 1950 hr/yr * 0.0005 ton/lb = 48.72 ton/yr

(Note: Montana Megawatts is not specifically limited to 1950 hours per year. Rather, Montana Megawatts is limited to keeping the NO_x emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

CO Emissions
Emission Factor: 37.97 lb/hr {Manufacturer's Guarantee and catalyst control}
Calculations: 37.97 lb/hr * 2580 hr/yr * 0.0005 ton/lb = 48.98 ton/yr

(Note: Montana Megawatts is not specifically limited to 2580 hours per year. Rather, Montana Megawatts is limited to keeping the CO emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

VOC Emissions
Emission Factor: 2.0 lb/hr {Manufacturer's Guarantee}
Calculations: 2.0 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.8 ton/yr

SO_x Emissions
Emission Factor: 0.65 lb/hr {Manufacturer's Guarantee}
Calculations: 0.65 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.8 ton/yr

(SOURCE #02)
Combined Cycle GE 7EA 80 MW Gas Turbine #2 plus HRSG (duct burner)

Size =	131 MW
Hours of Operation =	8,760 hr/yr
Max Fuel Flow =	8,493,696 MMBtu/yr
Heat Input =	981.71 MMBtu/hr
% Sulfur in Fuel =	0.0023
Fuel Heating Value =	1,020 Btu/SCF

PM Emissions
Emission Factor: 11.23 lb/hr {Manufacturer's Guarantee}
Calculations: 11.23 lb/hr * 8550 hr/yr * 0.0005 ton/lb = 48.0 ton/yr

(Note: Montana Megawatts is not specifically limited to 8550 hours per year. Rather, Montana Megawatts is limited to keeping the PM_{10} emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

PM_{10} Emissions
Emission Factor: 11.23 lb/hr {Manufacturer's Guarantee}
Calculations: 11.23 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 48.0 ton/yr

NO_x Emissions
Emission Factor: 49.97 lb/hr {Manufacturer's Guarantee and SCR}
Calculations: 49.97 lb/hr * 1950 hr/yr * 0.0005 ton/lb = 48.72 ton/yr

(Note: Montana Megawatts is not specifically limited to 1950 hours per year. Rather, Montana Megawatts is limited to keeping the NO_x emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

CO Emissions
Emission Factor: 37.97 lb/hr {Manufacturer's Guarantee and catalyst control}
Calculations: 37.97 lb/hr * 2580 hr/yr * 0.0005 ton/lb = 48.98 ton/yr

(Note: Montana Megawatts is not specifically limited to 2580 hours per year. Rather, Montana Megawatts is limited to keeping the CO emissions below 100 tons per rolling 12-month period. In doing this, Montana Megawatts may or may not need to limit the hours of operation of the unit.)

VOC Emissions

Emission Factor: 2.0 lb/hr {Manufacturer's Guarantee}

Calculations: 2.0 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 8.8 ton/yr

SO_x Emissions

Emission Factor: 0.65 lb/hr {Manufacturer's Guarantee}

Calculations: 0.658 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.8 ton/yr

(SOURCE #03)

John Deere Diesel-fired Emergency Water Pump

Size = 265BHP

Hours of Operation 500 hr/yr

PM Emissions

Emission Factor: 0.0007 lb/hp-hr {AP-42 Table 3.3-1, 7/95}

Calculations: 265 bhp * 0.0007 lb/hp-hr * 500 hr/yr * 0.0005 ton/lb = 0.046 ton/yr

PM_{10} Emissions

Emission Factor: 0.0007 lb/hp-hr {AP-42 Table 3.3-1, 7/95}

Calculations: 265 bhp * 0.0007 lb/hp-hr * 500 hr/yr * 0.0005 ton/lb = 0.046 ton/yr

NO_x Emissions

Emission Factor: 0.011 lb/hp-hr {AP-42 Table 3.3.1, 7/95}

Calculationa: 265 bhp * 0.011 lb/hp-hr * 500 hr/yr 0.0005 ton/lb = 0.73ton/yr

CO Emissions

Emission Factor: 0.0.0055 lb/hp-hr {AP-42 Table 3.3.1, 7/95}

Calculations: 265 bhp * 0.0055 lb/hp-hr * 500 hr/yr * 0.0005 ton/lb = 0.36 ton/yr

VOC Emissions

Emission Factor: 0.00071 lb/hp-hr {AP-42 Table 3.3-1, 7/95}

Calculations 265 bhp * 0.00071 lb/hp-hr * 500 hr/yr * 0.0005 ton/lb = 0.047 ton/yr

SO_x Emissions

Emission Factor: 0.00809 lb/hp-hr {AP-42 Table 3.3-1, 7/95}

Calculations 265bhp * 0.00809 lb/hp-hr * 500 hr/yr * 0.0005 ton/lb = 0.54 ton/yr

(SOURCE #04)

Cooling Towers

PM Emissions

Emission Factor: 0.65 lb/hr {Manufacturer's Guarantee}

Calculations: 0.65 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.85 ton/yr

PM_{10} Emissions

Emission Factor: 0.65 lb/hr {Manufacturer's Guarantee}

Calculations: 0.65 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.85 ton/yr

V. Existing Air Quality

The plant site is located in Section 30, Township 21 North, Range 4 East, in Cascade County, Montana. The air quality of this area is classified as either "Better than National Standards" or unclassifiable/attainment of the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

The current permit action will not increase emissions from the facility. The surrounding area is listed as attainment/unclassified for the National Ambient Air Quality Standards. The facility is not expected to cause a violation of any state or federal ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

The current permit action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Analysis Prepared By: Eric Thunstrom
Date: July 12, 2005